

Docket No. 200976US99

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Vladimir M. DOROSHENKO

SERIAL NO: 09/828,828

GAU: 2881

FILED: April 10, 2001

EXAMINER: JOHN R. LEE

FOR: TIME-OF-FLIGHT/ION TRAP MASS SPECTROMETER, A METHOD AND A COMPUTER PROGRAM  
PRODUCT TO USE THE SAME

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☒ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

Philippe J.C. Signore

Registration No. 43,922

Ronald A. Rudder, Ph.D.

Registration No. 45,618

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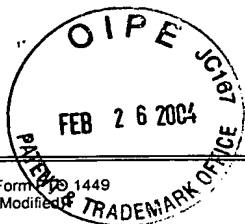
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Customer Number

**22850**

Tel. (703) 413-3000  
Fax. (703) 413-2220  
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Form 1449  
(Modified)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO.

200976US99

SERIAL NO.

09/828,828

## LIST OF REFERENCES CITED BY APPLICANT

APPLICANT

Vladimir M. DOROSHENKO

FILING DATE

April 10, 2001

GROUP

2881

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |    | DOCUMENT<br>NUMBER | DATE     | NAME                 | CLASS | SUB<br>CLASS | FILING DATE<br>IF APPROPRIATE |
|---------------------|----|--------------------|----------|----------------------|-------|--------------|-------------------------------|
|                     | AA | 4,531,056          | 07/23/85 | Labowsky et al.      |       |              |                               |
|                     | AB | 5,965,884          | 10/12/99 | Laiko et al.         |       |              |                               |
|                     | AC | 5,202,563          | 04/13/93 | Cotter et al.        |       |              |                               |
|                     | AD | 2,939,952          | 06/07/60 | W. Paul et al.       |       |              |                               |
|                     | AE | 3,065,640          | 11/27/62 | D.B. Langmuir et al. |       |              |                               |
|                     | AF | 4,540,884          | 09/10/85 | Stafford et al.      |       |              |                               |
|                     | AG | 4,882,484          | 11/21/89 | Franzen et al.       |       |              |                               |
|                     | AH | 5,107,109          | 04/21/92 | Stafford, Jr. et al. |       |              |                               |
|                     | AI | 5,714,755          | 02/03/98 | Wells et al.         |       |              |                               |
|                     | AJ | 5,399,857          | 03/02/95 | Doroshenko et al.    |       |              |                               |
|                     | AK | 5,814,813          | 09/29/98 | Cotter et al.        |       |              |                               |
|                     | AL | 5,464,985          | 11/07/95 | Cornish et al.       |       |              |                               |
|                     | AM |                    |          |                      |       |              |                               |
|                     | AN |                    |          |                      |       |              |                               |

## FOREIGN PATENT DOCUMENTS

|  |    | DOCUMENT<br>NUMBER | DATE     | COUNTRY | TRANSLATION |    |
|--|----|--------------------|----------|---------|-------------|----|
|  |    |                    |          |         | YES         | NO |
|  | AO | 944,900            | 06/28/56 | GERMANY |             |    |
|  | AP |                    |          |         |             |    |
|  | AQ |                    |          |         |             |    |
|  | AR |                    |          |         |             |    |
|  | AS |                    |          |         |             |    |
|  | AT |                    |          |         |             |    |
|  | AU |                    |          |         |             |    |
|  | AV |                    |          |         |             |    |

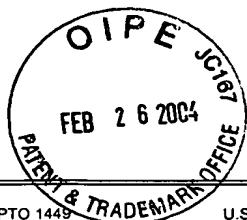
## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |   |   |
|--|----|---|---|
|  | AW | W.C. Wiley et al., Time-Of-Flight Mass Spectrometer with Improved Resolution, December 1955, vol. 26, Number 12, The Review of Scientific Instruments, pp. 1150-1157. |   |
|  | AX | A.F. Dodonov, et al., Electrospray Ionization on a Reflecting Time-of-Flight Mass Spectrometry, Chapter 7, American Chemical Society, Wash., DC, 1994, pp. 108-123.   |   |
|  | AY | Michael Karas et al., Laser Desorption Ionization of Proteins with Molecular Masses Exceeding 10 000 Daltons, Anal Chem. 1988, vol. 60, pp. 2299-2301.                |   |
|  | AZ | Bernhard Spengler et al., Peptide Sequencing by Matrix-assisted Laser-desorption Mass Spectrometry, Rapid Comm. in Mass Spectrometry vol. 6, 1992, pp. 105-108.       | <input checked="" type="checkbox"/> Additional References sheet(s) attached |

Examiner

Date Considered

\*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



|  |     |   |  |   |  |                              |  |
|--|-----|---|--|---|--|------------------------------|--|
| Form PTO 1449<br>(Modified)  |     | U.S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE  |  | ATTY DOCKET NO.<br><br>200976US99       |  | SERIAL NO.<br><br>09/828,828 |  |
| LIST OF REFERENCES CITED BY APPLICANT  |     |   |  | APPLICANT<br><br>Vladimir M. DOROSHENKO |  |                              |  |
|  |     |   |  | FILING DATE<br><br>April 10, 2001       |  | GROUP<br><br>2881            |  |
| OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)  |     |   |  |   |  |                              |  |
|  | AAA | Daniel R. Jardine, et al., A Tandem Time-of-flight Mass Spectrometer, Organic Mass Spectrom., 1992, vol. 27, pp. 1077-1083.   |  |   |  |                              |  |
|  | AAB | Kevin L. Schey et al., Ion/Surface Collision Phenomena In An Improved Tandem Time-Of-Flight Instrument, International Journal of Mass Spectrometry and Ion Processes, 1989, vol. 94, pp. 1-14.  |  |   |  |                              |  |
|  | AAC | Kevin L. Schey, et al., A Tandem Time-Of-Flight Mass Spectrometer For Surface-Induced Dissociation, International Journal of Mass Spectrometry, Ion Processes, 1987, vol. 77, pp. 49-61.  |  |   |  |                              |  |
|  | AAD | F.H. Strobel, et al., Detection of Femtomole and Sub-femtomole Levels of Peptides by Tandem Magnetic Sector/Reflectron Time-of-Flight Mass Spectrometry and Matrix-Assisted Laser Desorption Ionization, J. Am. Soc. Mass Spectrom 1991, vol. 2, pp. 91-94. |  |   |  |                              |  |
|  | AAE | F.H. Strobel, et al., Neutral-Ion Correlation Measurements: A Novel Tandem Mass Spectrometry Data Acquisition Mode for Tandem Magnetic Sector/Reflectron Time-of-Flight Instruments, Anal. Chem., 1992, Vol. 64, pps. 754-762.                              |  |   |  |                              |  |
|  | AAF | R. Weinkauf, et al., Laser Tandem Mass Spectrometry in a Time of Flight Instrument, International Journal Mass Spectrom Ion Processes, 1989, vol. 44a, pp. 1219-1225.   |  |   |  |                              |  |
|  | AAG | R. Graham Cooks, Ion Trap Mass Spectrometry, Special Report, C&EN, March 25, 1991, pp. 26-41.   |  |   |  |                              |  |
|  | AAH | Vladimir M. Doroshenko, et al., Matrix-assisted Laser Desorption/Ionization inside a Quadrupole Ion-Trap Detector Cell, Rapid Communications in Mass Spectrometry, 1992, vol. 6, pp. 753-757.   |  |   |  |                              |  |
|  | AAI | J.E. Crawford, et al., Laser Desorption Sources and Time-of-Flight Injection for RFQ Traps, Hyperfine Interactions, 1993, vol. 81, pp. 143-149.   |  |   |  |                              |  |
|  | AAJ | Steven M. Michael, et al., An Ion Trap Storage/Time-of-Flight Mass Spectrometer, Rev. Science Instrum., October 1992, vol. 63, pp. 4277-4284.   |  |   |  |                              |  |
|  | AAK | Th. L. Grebner, et al., Laser Produced Ions Stored in a Cylindrical Ion Trap and Detected in a Reflectron Time-of-Flight Mass Spectrometer, International Journal of Mass Spectrometry and Ion Processes, 1994, vol. 137, pp. L1-L6.                        |  |   |  |                              |  |
|  | AAL | Vladimir M. Doroshenko et al., A Quadrupole Ion Trap/Time-of-Flight Mass Spectrometer with a Parabolic Reflection, Journal of Mass Spectrometry, 1998, vol. 33, pp. 305-318.  |  |   |  |                              |  |
|  | AAM | Andrej Shevchenko et al, Rapid 'de Novo' Peptide Sequencing by a Combination of Nanoelectrospray, Isotopic Labeling and a Quadrupole/Time-of-Flight Mass Spectrometer, Rapid Communications in Mass Spectrometry, 1997, vol. 11, pp. 1015-1024.             |  |   |  |                              |  |
|  | AAN |   |  |   |  |                              |  |
|  | AAO |   |  |   |  |                              |  |
|  | AAP |   |  |   |  |                              |  |
|  | AAQ |   |  |   |  |                              |  |
| Examiner   |     |   |  |   |  | Date Considered              |  |
| *Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |     |   |  |   |  |                              |  |